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the same reason aluminium foil is stated to be better fitted than platinum foil for the fusion of alkaline carbonates, the detection of manganese, etc.

ERSBYITE.—This feldspar, hitherto regarded as an anomalous variety of doubtful existence, has recently been shown by F. J. Wiik, to be a potash microcline. The large percentage of lime given in former analyses is proved to be due to an admixture of calcite. After purification in weak acid, the following composition was found:

SiO ₂	Al ₂ O ₃	CaO	K ₂ O	Na ₂ O
66.18	19.52	.36	13.03	.91

The feldspar occurs in colorless crystals at Pargas, Finland, and is intimately associated with another feldspar, now shown to be andesite. The optical properties are identical with microcline, and the name ersbyite must be dropped from the list of species.

MINERALOGICAL NOTES.—N. H. Darton is giving, in the *Scientific American Supplement*, a popular account of the mineral localities and the minerals to be found in and around New York city. The articles are written in a familiar style, and will be of great assistance to beginners in mineralogy living near New York city. Professional mineralogists also will be glad to know the exact localities of the specimens in their cabinets, and will be interested in the full description of their method of occurrence.—The Proceedings of the Mineralogical and Geological Section of the Academy of Natural Sciences of Philadelphia are offered for sale at fifteen cents.—Crystallographers will be interested in the abnormal *diamond* crystals recently described and figured by Purgold of Dresden. One of these has eight projecting triangular points—the result of repeated twinning.—The second part of Professor Tschermak's "Lehrbuch der Mineralogie" (Vienna) has recently been issued. It is a valuable work, embodying the latest results of mineralogical research.—Selenium and tellurium have been found in the sulphur of Japan.

GEOGRAPHY AND TRAVELS.¹

THE RESCUE OF THE CREW OF THE EIRA.—The steam whaler *Hope*, Captain Sir Allen Young, which sailed from the Scotch port of Peterhead about June 20th, to search for and relieve the crew of the *Eira*, has been most successful in its mission, having returned with all the members of the missing expedition on board. The *Eira* left Peterhead on the 14th of June, 1881. The ice that season reached very far south, and no opening could be found to enable her to get north until the middle of July. Franz-Josef's Land was reached on July 23, and the *Eira* steamed along the coast to within fifteen miles of Cape Ludlow. The ice was closely packed to the north, so it was decided to return to Gray

¹ Edited by ELLIS H. YARNALL, Philadelphia.





DISCOVERIES
along the
SOUTH COAST
OF
FRANZ-JOSEF LAND
by M.F.R. Leigh Smith,
1880.

Track of the Eira
Soundings in fathoms

Bay and wait till a more favorable opportunity should present itself to proceed. On August 7 the *Eira* was made fast to the land floe near Beil Island, and a store house was erected of materials taken out of the *Eira*. On August 15 the *Eira* left Bell Island and being unable to pass to the eastwards of Barents Hook, she was made fast to the land floe off Cape Flora. The next few days were spent in collecting plants and fossils, which unfortunately were lost with the vessel. On August 21 the *Eira* was heavily nipped by the ice, and about 10 A. M. a leak was discovered. The *Eira* sank in two hours time, before many stores were saved. A house was built on Cape Flora of stones and turf, and covered with sails, and the winter was spent there. The party depended chiefly for food on the bears and walrus. Thirty-six bears and twenty-nine walrus were killed and eaten. Large numbers of walrus appearing in June, they were enabled to lay in provisions for two months and started in four boats on June 21, 1882, for Novaya Zemlya. Eighty miles of water was encountered before reaching ice. Then the troubles began, and six weeks of constant toil followed until the open water was again found, and within twenty-four hours of leaving the ice the four boats, with their crews of twenty-five in all, were safely landed upon the beach at Matyushin Strait on the evening of August 2, where they were found the next day, first by the Dutch expedition in the *Willem Barentz*, and then by the *Hope*. The *Hope* arrived at Peterhead on August 20, within a few hours of the anniversary of the day when the *Eira* was lost.

There seems now no reason to doubt that at some period of every summer, Franz-Josef Land is accessible without great difficulty, and it undoubtedly presents, at present, the most inviting and encouraging field for Arctic exploration for the purpose of reaching the most northern latitudes.

ARCTIC EXPLORATION.—Lieutenant Hovgaard, formerly of the Nordenskiöld Expedition, will sail early in June, from Copenhagen, in the steamer *Dympna* for Cape Chelyuskin, afterwards endeavoring to reach Franz-Josef Land.

Remains of Northmen have been found on the east coast of Greenland in lat. $60^{\circ} 31' N$. The building discovered is forty paces long by ten wide, and its foundations consist partly of stones of cyclopean dimensions. There are similar ruins, the natives report, in lat. $60^{\circ} N$.

Immense ice-floes filled the sea between Spitzbergen and Iceland in June. In Iceland large districts are said to be suffering from famine, as the vessels are unable to land the provisions on the customary arrival of which they depended. The severity of the weather is preventing the growth of the crops, and large numbers of sheep and ponies are dying.

Baron Nordenskiöld has published the first volume of the "Scientific Results of the *Vega* Expedition." It covers 800 pages

with maps and tables. There are papers on the aurora, the health of the expedition, the color sense of the Chukchis, on the botanical collections, meteorological observations, the Invertebrata of the Arctic Seas, etc.

Nature states that the French Government is making preparations to send out an Antarctic Expedition to Cape Horn. The expedition will be fitted out for a period of eighteen months, and 2,500,000 francs have been voted for it.

Recent explorations in the Argentine portion of the Terra del Fuego show an abundant occurrence of gold.

DEEP SEA EXPLORATIONS.—The president of the English Geologists Association in his recent address before that Society, has given a valuable account of deep sea explorations from Capt. Dayman's survey of the North Atlantic sea bed in 1857, to the expedition of the *Challenger*.

The French Commission will continue their deep sea explorations on board the *Travailleur* during this season. The investigations will include the ocean bed along the coast of Spain, Portugal and Morocco.

ASCENT OF MOUNT COOK.—The Rev. W. S. Green and his two Swiss guides, succeeded in ascending Mount Cook, the highest known Australasian peak, on the 2d of March last, after two unsuccessful attempts. Great danger was incurred from continual avalanches, and the summit was not reached until 6.20 P.M. As the clouds obscured the view and the hour was so late only ten minutes were spent on the summit and no observations appear to have been taken so that the actual height of Mount Cook is still unknown. It is given in the government map as 12,349 feet. In the account given in the *Proceedings* of the Royal Geographical Society it is said: "The scenery about the upper part of the Tasman Glacier and its branches, is described as supremely grand, equaling and even excelling the most famous scenery in the European Alps. The peaks rise higher above the level of the snow fields, and these are more extensive, and under the brighter and clearer atmosphere of New Zealand, present a more dazzling beauty. The spurs of Mount Cook, below the snow line, were covered with plants which reminded the travelers of the Alpine vegetation of Switzerland. Among these was a *Gnaphalium* closely resembling *G. leontopodium*, the well-known 'Edelweiss.'"

AFGHANISTAN.—During the recent occupation of Afghanistan by the English, an area of 39,500 square miles has been surveyed in more or less detail, in various parts, and a further area of about 7000 square miles has been explored by native agency. An important result of these surveys is to show that the position of Kabul, Ghazni and Kandahar, as indicated previously on the maps, are correct in latitude but erroneous in longitude by ten to fourteen miles, and that they all require to be shifted to the east,

bringing them so much nearer to the British frontier. A large number of the heights are found to be considerably in excess.

MICROSCOPY.¹

BIBLIOGRAPHY OF THE MICROSCOPE.—Mr. Julien Deby, of London, late vice-president of the Belgian Microscopical Society, has commenced the publication, under this title, of a most useful work. Part III, relating to the Diatomacea, has appeared, Mr. Frederick Kitton having assisted in its preparation. Parts I and II, relating to the microscope proper, the Protozoa, the Desmidiæ, etc., will shortly follow. In preparing for his own convenience this catalogue of the books and papers in his microscopical library, Mr. Deby has with much labor prepared a catalogue which, with its added desiderata, constitutes a very complete microscopical bibliography. The work includes reference to papers in journals and transactions; and also contains a chronological index to all the publications referred to. It is handsomely printed for the author, and the necessarily limited edition has been generously distributed by him in the hope of making it useful to microscopical friends—a hope which will be abundantly realized.

APPARENT SIZE OF MAGNIFIED OBJECTS.—Professor Wm. H. Brewer read a paper upon this subject at the recent meeting of the A. A. A. S. The well known diversity of opinion as to the apparent size of an object under the microscope was illustrated by reports of experiments upon over 400 observers of all classes, ages, occupations and qualifications. The object was a common louse magnified, as estimated by scientific microscopists, to the size of 4.66 inches. By far the greater number of observers underestimated this value; two estimates were only one inch, while seven were over a foot, and one (by an expert draughtsman) was at least five feet. Among new students the first impression was usually somewhat larger than the real value, and this was adhered to for some time.

DOUBLE-STAINING OF NUCLEATED BLOOD CORPUSCLES.—Dr. Allea Y. Moore gives, in *The Microscope*, a valuable explanation of the method of differential staining by which his fine slides of blood corpuscles are produced. The blood is spread upon the slide by the usual method, drawing a drop across one slide by means of the edge of another slide. When the film of corpuscles, thus evenly spread, is thoroughly dry, the slide is flooded for three (3) minutes with a solution of rosin five grains, in distilled water and alcohol, four drachms each. The slide is then washed by passing it gently through clean water, and before drying is flooded for two (2) minutes with a solution of methyl analine green five grains, in distilled water one ounce. It is then

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